



## What is Snoring and Sleep Apnea?

Anyone who has a snorer for a bed partner is aware of the disrupted sleep and frustration that often occurs. The unpleasant sound of snoring is produced by a vibration in the tissue at the back of the throat as air is inhaled or exhaled, and generally occurs as a result of the person's airway being partially blocked or obstructed by the tongue or other soft tissue. Although snorers have long been the target of jokes and ridicule, snoring is no laughing matter. In fact, loud, disruptive snoring may be the sign of a more serious disorder known as sleep apnea.

Sleep apnea is a serious, potentially life threatening condition that is characterized by brief pauses in a person's breathing during their sleep.

*The two main types of sleep apnea are:*

- **Central Sleep Apnea.** In this condition, the part of the brain that controls breathing during sleep is not working properly, as it fails to signal the chest muscles to make breathing movements. A person will generally stop breathing as soon as they fall asleep, which causes an emergency arousal response resulting in the individual awakening with a start and a gasp.
- **Obstructive Sleep Apnea (OSA).** In this condition (by far, the more common form of sleep apnea), the upper airway becomes blocked during sleep by the tissue of the soft palate, throat, and tongue. Pauses in breathing can last anywhere from 10 seconds to over a minute. The lack of oxygen, in turn, causes an arousal reflex that wakes the individual, often with a loud gasping, or snorting sound.

The cycle of breathing pauses and awakenings may repeat itself up to several hundred times during the night, resulting in severe daytime sleepiness for those affected. In spite of all this, most people who suffer from sleep apnea are still not aware of their condition.



## What Are the Risk Factors Associated with Sleep Apnea?

Sleep apnea is more likely to occur in males, although women also experience this condition. Sleep apnea occurs primarily in men and women between the ages of 30 and 50 years old who are more than 20% over their ideal body weight.

Children and adults can also have specific anatomical features that predispose them to this condition, such as: chronic swelling of the nasal passages, a deviated nasal septum, enlarged tonsils, enlarged adenoids, an extra long or fleshy soft palate, a large uvula, a large tongue, a small airway opening, a short lower jaw, or a short neck. Lifestyle risk factors include alcohol and sedative use, smoking, poor eating habits, and lack of exercise.

If left unchecked, sleep apnea can lead to an increased risk of irregular heartbeat, lung complications, high blood pressure, stroke, and heart attack. It can also be the primary cause of traffic and other accidents associated with sleepiness. The risk of these complications is greatly reduced when treatment is sought for the management of this condition. Therefore, proper assessment, diagnosis, and treatment are vital to the management of this condition and improved health.



## What is the Treatment for Sleep Apnea?

The assessment of sleep apnea requires both a clinical evaluation and objective testing to substantiate the diagnosis of this condition. This requires the expertise of a health care professional, preferably a sleep specialist, as the objective testing can only be done in a sleep laboratory equipped with the necessary facilities. The most common diagnostic test used for the evaluation of sleep apnea is the Nocturnal Polysomnogram (PSG). The PSG is a night time study that evaluates a person's physiological cues as they sleep, such as their brain wave activity, muscle and eye movements, snoring sounds, heart and breathing rates, as well as their oxygen levels. The PSG is used to determine the severity of sleep apnea, as well as to detect other sleep disorders that may be contributing to an individual's daytime sleepiness.

Once a diagnosis has been made, treatment is essential for the management of sleep apnea. Examples of such treatments include:

- **Continuous Positive Airway Pressure (CPAP).** This is the most common and effective treatment for moderate to severe sleep apnea. In this treatment, a mask that is worn over the nose during sleep, and a machine (which is attached to the mask) blows pressurized air through the nasal passage. The pressure is adjusted to an adequate amount, which holds the airway open during sleep, thereby preventing snoring and sleep apnea.
- **Oral Appliances.** For mild to moderate cases of sleep apnea, or for individuals whose problem is primarily related to snoring, a dental appliance may be recommended. These devices work by repositioning the lower jaw and tongue forward during sleep, and are typically custom-fitted to the person's mouth by a dentist or orthodontist specializing in this area.
- **Surgery.** For some people, surgical procedures may be recommended to increase the size of the airway opening. Although several procedures exist to accomplish this, none of them are completely successful or without risks. Common techniques used in this regard are the removal of excess tissue at the back of the throat, or reconstruction of the lower jaw.
- **Sleep Hygiene and Behaviour Modification.** These play an important role in the treatment of sleep apnea. Examples of such strategies include losing weight, regular exercise, smoking cessation, avoidance of alcohol or sedatives before sleep, and training to sleep on one's side (rather than on their back).



## The Canadian Sleep Institute's 10 Commandments for a better sleep

If getting a better night's sleep is your goal, and underlying medical conditions are not an impediment, you may achieve success by following the Ten Commandments of Sleep Hygiene:

1. Schedule a relaxing period before going to sleep, to separate your body and mind from the day's hassles.
2. Use your bedroom primarily for sex and sleep, and not as an all-purpose activity area.
3. Your bed should be comfortable, large enough, in a quiet, dark room, and at the right temperature.
4. Keep a regular schedule, going to bed and getting up at the same time each day. Don't go to bed until you feel sleepy.
5. Be consistent about taking naps. Take one regularly or not at all.
6. Exercise regularly in the morning or early afternoon, but do not engage in strenuous activity late in the evening. A relaxing, mild physical activity might be helpful close to bedtime.
7. Assess your caffeine intake, and avoid caffeine after 2 p.m. Smoking close to bedtime or at night causes further sleep disruption.
8. Don't use alcohol or drugs, such as sedatives. While they might help you initially fall asleep, they lead to sleep disruption and deprive you of deep sleep (at times, even for years).
9. If you feel hungry in the evening, have a light snack or a glass of milk. Heavy meals close to bedtime can result in discomfort and further sleep disturbance.
10. Above all, do not try too hard. If you can't fall asleep, don't lie in bed anxious and frustrated. Leave your bedroom to read, watch T.V. or do something else to relax, going back to bed only when you feel sleepy again.

- Adam Moscovitch, MD, FRCP (C), ABSM

### The Good News:

Sleep specialists are in a position to properly diagnose and treat sleep apnea. Patients who seek appropriate diagnosis by a qualified sleep specialist can manage their condition and resume a perfectly healthy and normal life. Our specialists at the Canadian Sleep Institute are experienced and well trained in the assessment, diagnosis, and treatment of sleep apnea, along with a host of other sleep disorders. Furthermore, we are equipped with a diagnostic sleep laboratory and a CPAP clinic, which can fully accommodate the needs of our patients suffering from sleep apnea. If you feel that you could benefit from seeing a sleep specialist, call us for more information or have your family physician refer you to:

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## Canadian Sleep Institute

The Canadian Sleep Institute is a leading centre of excellence in the provision of clinical care, diagnostic services, corporate consulting, clinical research, and education in the area of sleep and fatigue disorders. Our full-service, community-based sleep centre serves a patient population from across Western Canada, and is accredited by the College of Physicians and Surgeons of Alberta to assess, diagnose, and treat the full spectrum of over eighty sleep and fatigue disorders.

Our fully qualified team of clinicians, headed by a board-certified sleep physician, is focused on providing comprehensive, coordinated, inter-disciplinary care in the most convenient, accessible, and cost-effective manner available. We feature a state of the art, four-bedroom, overnight sleep diagnostic facility in a comfortable atmosphere and residential hotel-like setting. We also provide a full-service CPAP clinic and follow-up care program for those patients with sleep apnea and related conditions.



## Canadian Sleep Institute

*Better Health Through Better Sleep*

# Snoring & Sleep Apnea

Is it affecting  
*your sleep*  
and the sleep of  
*your loved ones?*

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*Answers to Questions*

*and information about*

*Sleep Apnea and Snoring.*

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